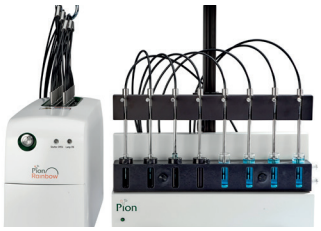
Bridging the gap between *in vitro* experiments and *in vivo* outcomes

Get better *in vitro/in vivo* correlation (IVIVC) and PhysioChemical Indicators for solubility, absorption and permeability.

Sirius T3 PhysChem compound screening instrument for lead optimization

Sirius T3 measures pK_a, log P and solubility of ionizable drugs and small molecules using sub-milligram quantities of sample. Used in early stage compound screening, PhysChem characterization and pre-formulation studies. Run complicated assays with automated reagent delivery, stirring, spectra collection, pH measurement and temperature control. Optional autoloader for improved convenience and high throughput. Helps in selecting the best structures for development to reduce the risk of costly late-stage failures.



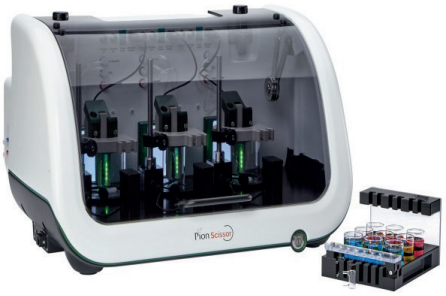
Rainbow fiber optic UV concentration monitor

An *in situ*, fiber optic UV-Vis spectrometer for formulation dissolution profiling, flux assays, solubility studies and other applications requiring accuracy and repeatability in concentration measurement. May be integrated with various dissolution test stations *(shown with MicroDISS Profiler, 8-position, stir controlled minibath left.)* Up to 8 independent fiber optic channels with data acquisition of the entire UV spectral (200-720nm) to provide concentration measurements as fast as every 2 seconds.

Investigate release performance of subcutaneous formulations with SubCutaneous Injection Site SimulatOR (SCISSOR)

Assess the risk and performance of subcutaneously administered drugs including biologics, peptides and small molecules *in vitro*. Determine rank order of different formulations whilst simulating stress conditions and environmental transitions that can lead to precipitation/aggregation events.

Our custom-designed extracellular matrix (ECM) options provide a mimic of the human subcutaneous space. The only commercially-available instrument that bridges the gap between standard dissolution and solubility results and *in vivo* Pharmacokinetic (PK) studies.

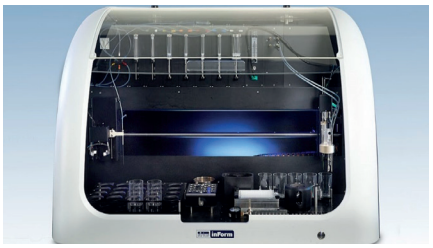


SDi2, Surface Dissolution Imaging

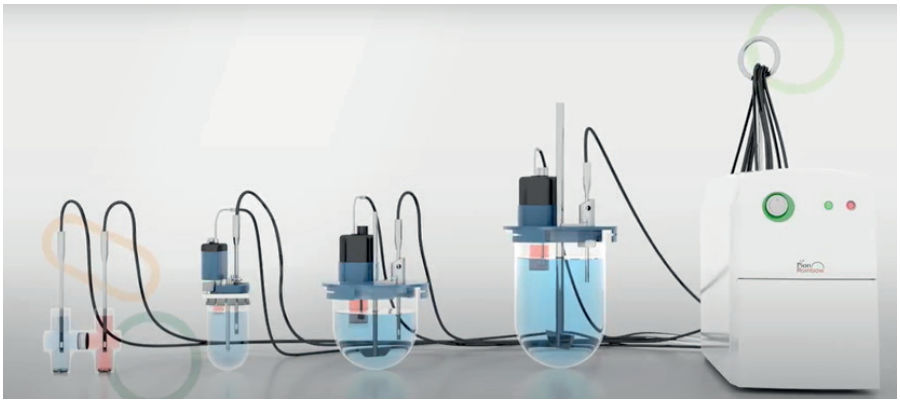
Next generation of real-time surface dissolution imaging of API's. The UV and visible light spectrum allows you to investigate the physical processes occurring at the solid-liquid interface during dissolution. Measure intrinsic dissolution, release rates, swelling, erosion and disintegration kinetics of a range of solid dosage forms. The SDi2 uses a powerful 4.2 megapixel ActiPixTM detector to generate a high-resolution video of a solid dose during dissolution while simultaneously measuring the concentration. Built-in flushing avoids cross-contamination between samples.

inForm

A versatile formulation workstation designed to enable the fully automated study of dissolution which mimics *in vivo* conditions. Enables biphasic dissolution, gradient pH adjustment and controlled supersaturation to show how a drug would behave under biorelevant conditions. Includes the industry standard UV-metric and pH-metric methods for the determination of pK_a and solubility for ionizable substances which allows extensive physchem characterization for your API and its formulation. Built-in spectrophotometer allows for the UV quantification of samples across multiple wavelengths.



Automated dissolution, permeability and solubility testing solutions

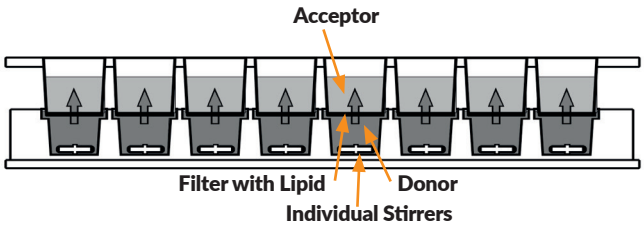


Assess the *in vitro* absorption potential (transmembrane flux) of prototype formulations using small-scale experiments.

A variety of configurations are available for our Rainbow optical dissolution monitoring system. Our microDISS, miniDISS, BioFlux, MicroFlux and MacroFlux systems allow you to conduct dissolution and flux experiments using a variety of biorelevant volumes. The temperature controlled, auto-stirring dissolution test stations are integrated with our Rainbow, fiber optic UV system.

Pion's flux technology combines traditional dissolution testing with repeatable methods for assessing the absorption potential of APIs, API/ingredient combinations or finished dosage products. The result is a single combined test that makes *in vitro – in vivo* correlation (IVIVC) modeling and bioequivalence testing more realistic and more reliable. Our flux systems evaluate the absorption potential of your compounds as the acceptor and donor chambers are separated by a biomimetic membrane. Ask us what's possible today and we'll help configure a system that's just right for you.

Parallel Artificial Membrane Permeability Assay (PAMPA) Kits



Gastro Intestinal Tract • Blood Brain Barrier

Pion's PAMPA technology uses a range of membranes to mimic physiologic conditions. It allows you to evaluate the passive permeability of APIs as well as the absorption potential of simple or complex formulations very precisely using robust models and protocols in a 96-well plate format.

Pion's PAMPA can be used for discovery, preformulation excipient screening and comparative flux assays. Measuring concentration on both sides of a bio-mimetic membrane improves the assessment of the absorption potential and provides more realistic IVIVC predictions.

Pion

Pion stands behind the science

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